

Special Issue

Hybrid Photovoltaic-Thermal (PVT) Applications

Message from the Guest Editors

Photovoltaic (PV) and photo-thermal (PT) systems are important technologies in addressing the growing requirement for renewable energy. Coupling PT and PV technologies into hybridised photovoltaic/thermal (PVT) systems can offer an effective approach to the minimization of energy losses and enhanced solar energy conversion efficiencies. For large-scale implementation, PVT systems require thermal fluids that can enhance the combined conversion efficiency achievable by controlling the “thermal” and “electrical” components of the solar spectrum. Partitioning the two solar spectrum components through spectral beam splitting (SBS), whereby a liquid optical filter serves as both a spectral modulator and heat transfer fluid, can be achieved through the dynamic control of light-matter interactions within the fluid. This Special Issue aims to present the recent advances in hybrid photovoltaic-thermal (PVT) applications from both theoretical and experimental perspectives, in which liquid beam splitters and filters play a major role.

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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